

TECHNIQUE FOR PROPER USE OF METERED DOSE INHALERS

Equipment Required:

Prescribed Medication
Examination Gloves(optional)

Procedure:

1. Remove the cap and hold inhaler upright.
2. Shake the inhaler.
3. Ask the resident to tilt the head back slightly and breathe out.
4. Position the inhaler in one of the following ways:
 - Open mouth with inhaler one to two inches away.
 - Use spacer with inhaler; place spacer in mouth (Spacers are particularly beneficial for older adults & young children).
 - Position inhaler in mouth, close lips around inhaler.
5. Press down on inhaler to release medication as the resident starts to breathe in slowly.
6. Encourage the resident to breathe in slowly (over 3 to 5 seconds).
7. Ask the resident to hold breath for 10 seconds to allow medication to reach deeply into the lungs.
8. Repeat puffs as directed. (Waiting one minute between puffs may permit additional puffs to penetrate the lungs better).

SPACING AND PROPER SEQUENCE OF INHALED MEDICATIONS

Spacing and proper sequence of the different inhalers is important for maximal drug effectiveness. If more than one inhaler is used, following the sequence listed below provides the most benefit to the patient.

1. Bronchodilators / Beta-Agonists

albuterol - Ventolin[®], Proventil[®];
metaproterenol - Alupent[®];
pirbuterol - Maxair[®];
bitolterol - Tonalate[®]

- These agents work by promoting bronchodilation by relaxing bronchial smooth muscle.

2. Anticholinergic Agents

ipratropium - Atrovent[®]

- Antagonizes the action of acetylcholine with resulting bronchodilation.
- Minimal systemic activity.
- Is used for maintenance therapy only, not acute episodes.
- May be more useful than traditional bronchodilators in chronic bronchitis.

3. Miscellaneous Agents

cromolyn - Intal[®];
nedocromil - Tilade[®]

- Stabilizes mast cells and inhibits the release of histamine from these cells.
- Must be used on a regular basis, not useful on a PRN basis.
- May be used prophylactically prior to exercise.

4. Corticosteroids

triamcinolone – Azmacort[®];
flunisolide – Aerobid[®];
budesonide – Pulmicort[®]
fluticasone/salmeterol - Advair[®]

- Anti-inflammatory agents may have a variety of actions useful in management of COPD.
- Must be used on a regular basis, not PRN agents.
- Minimal systemic activity

All Inhalers Must Be Shaken Well Prior To Use !!

Bronchodilator: Proventil, Alupent, etc.

Wait one minute between “puffs” for multiple inhalations of the same drug



Wait five minutes before administering

Atrovent / Miscellaneous Agents

Wait one minute between “puffs” for multiple inhalations of the same drug



Wait five minutes before administering

Corticosteroids; Azmacort, Pulmicort, etc.

Wait one minute between “puffs” for multiple inhalations of the same drug

Rinse the mouth out following use (do not swallow the water) to help prevent oropharyngeal fungal infections. The use of a spacer device may also reduce these side effects.